

REMARKS

The Office Action, in creating the rejections, has misinterpreted a system for locating a mobile appliance with mobile locating sensors, with a method and system for positioning location determining sensors. For this reason the rejections are improper.

Anticipation Rejections

The Office Action rejected claims 1-3, 5-6, 10, 12-16 and 18-21 as being anticipated by Hawkes et al.

Claim 1 is a method of determining the position within the coverage area of mobile-appliance location determining sensors.

The Office Action has mischaracterized Hawkes in that Hawkes is directed to a method and apparatus for mobile emitter location, not for locating location determining sensors.

The Office Action cites Col. 8 lines 52-Col. 9 line 10, col. 10, lines 41-46 and col. 11, lines 33-51 in support of its contention that Hawkes discloses “a method of determining the position within the coverage area of mobile-appliance location determining sensors.”

Col. 8, lines 52-Col. 9 line 10 describes a method for tasking and queuing of location measurements to determine a location of emitters by the sensors, and not a method for locating the location determining sensors. Hawkes recites:

“A method for tasking and queuing of location measurements is shown in FIG 8. This method provides a tasking scheme for allowing higher priority emitters to be located before lower priority emitters.”

Col. 10, lines 41-46 describes a mobile location sensor, and that such a sensor may be deployed in an enclosure other than base stations when needed. Again there is no disclosure for determining the position of the location determining sensors within the coverage area. Hawkes recites:

“The mobile location sensor 19 is an electronic unit at the base station that intercepts the signal from a cellular telephone 1 to measure its TOA and/or AOA. The MLS may also be deployed in an enclosure other than a base station for those areas where an increased number of MLSs are necessary so that the transmissions from cellular telephones can be intercepted by multiple MLSs and to improve location accuracy.”

Col. 11, lines 33-51 of Hawkes describes the MLSs use narrowband or wideband receiver technology and describes the operation of the MLSs, yet there is no disclosure of a method for locating the location determining sensors within the coverage area. Hawkes recites:

“The MLS use; narrowband or wideband receiver technology. The preferred embodiment uses low cost narrowband technology.”

The cited passages relied upon by the Office Action merely describe what a MLS is and their operation. There is no conceivable interpretation of Hawkes, and particularly the cited passages that disclose a method of determining the position within the coverage area of mobile-appliance location determining sensors as recited in Claim 1.

In addition, the Office Action has also misinterpreted the disclosure of Hawkes regarding other features recited in Claim 1.

The Office Action suggests that Hawkes discloses determining for each of the plural base stations the capability to receive signals from a mobile appliance and cites Col 4, lines 5-16 as a basis. Hawkes does not disclose what the Office Action purports, Hawkes discloses a search

technique is performed by a MLS using narrow band receivers and digital signal processing, and nothing else.

The Office Action suggests that Hawkes discloses estimating the transmit power level of the mobile appliance at a selected geographic point in the coverage area and cites col. 8, lines 12-18 as a basis. Again Hawkes does not disclose what the Office Action purports, the cited passage of Hawkes discloses that the MLS requests via the MSC to increase the mobile power level. Hawkes does not estimate the transmit power level of the Mobile appliance at any point much less a selected geographic point in the coverage area.

The Office Action assertions that Hawkes discloses estimating for each of the plural base station, the strength of a signal from the mobile-appliance; identifying each of the plural base stations estimated to receive a signal above a predetermined threshold from the mobile appliance; estimating the accuracy of a calculated position of the mobile appliance from the estimate of the signal strength received at the identified base station and determining the position of mobile appliance location determining sensors in the coverage area needed to provide the estimated location determining accuracy within a predetermined threshold are equally wrong.

Hawkes at Col. 3, lines 38-52 describes using TDOA and AOA with measurement of signal strength to generate a location and does not determine estimates of the signals strength. Hawkes at Col. 9, lines 22-32 describes determining a course area information to find the precise location of the cellular telephone and does not disclose identifying the base station estimated to receive a signal above a predetermined threshold. Hawkes at Col. 3 lines 1-4 and cole 4, lines 26-43, describes the use of error reduction techniques to mitigate low received signal strength and does not use the estimate of signal strength to estimate the location accuracy of a mobile

appliance. And as shown above, the cited passages of Hawkes disclose the location of a mobile appliance and not locating location determining sensors.

For a multitude of reasons, Hawkes does not, can not and can not be interpreted to disclose the features of Claim 1. Likewise Hawkes cannot disclose 2-3, 5-6, 10, 12-15 which depend from Claim 1.

Additionally, for the same reasons as enumerated above, Hawkes does not disclose a system for determining the position area of mobile appliance location determining sensors as recited in Claim 16.

Regarding Claim 18, the Office Action suggest that Hawkes discloses positioning at some but not all of the bases station based on an estimated accuracy of the location calculated by the location determining sensors and cites col. 5, lines 22-25 and col. 10, lines 39-46 as a basis. Hawkes recites “the mobile location sensors may alternately be deployed separately from the cellular base stations” such a disclosure does not anticipate the claim language requiring a location determining sensor positioned at some but not all of the base stations, and in know way is the positioning based on an estimated accuracy of the location or the cost of the location determination sensors. Col. 4 lines 9-25 simply states that in order to reduce the cost of the mobile location sensors an extensive dynamic calibration process at the mobile location sensor is employed.

Therefore, Hawkes can not anticipate Claim 18.

Regarding Claim 19, the Office Action suggests the Hawke discloses “the location determining sensors are positioned based on minimizing the number of sensors required for the coverage area” and cites Col. 9 line 1-49.

There is nothing in the cited passages that teaches locating the location determining sensors based on minimizing the number of sensors. The cited passage only describes the locating of a mobile emitter with the MLS.

Hawkes can not anticipate Claim 19. Likewise Hawkes cannot disclose Claim 20 which depends from Claim 19.

The Applicants for at least the above reasons request withdrawal of the rejections of Claims 1-3, 5-6, 10, 12-16 and 18-20.

Obviousness Rejections

The Office Action rejected Claims 4 and 11 as being obvious over Hawkes in view of Leblanc.

The Office Action suggest that LeBlance, discloses a method to diagram and model the RF propagation loss from a given base station/radio port.

However, whether Le Blance discloses this is immaterial, in that Le Blance does not disclose a method for determining the location of location determining sensors and therefore cannot obviate the deficiencies of Hawkes with regards to Claim 1 from which Claims 4 and 11 depend.

The Office Action also rejected Claims 7-9 and 17 as being obvious over Hawkes.

The Office Action suggests it would have been obvious to include a method wherein the capability of the mobile location determining sensors include a two channel time difference of arrival determination capability, a four-channel time difference of arrival determination

capability and a four channel time difference of arrival combined with an angle of arrival determination capability as taught by Hawkes.

However, even if it would have been obvious, which is not conceded, the deficiencies of Hawke in regards to Claims 1 and 16 as discussed above, are not obviated by such a contention.

Claims 8 and 9 depend from Claim 7 and therefore can also not be rendered obvious irrespective of additional features recited therein.

For at least the above reasons, the Applicants request withdrawal of the rejections of Claims 4, 7-9, 11 and 17.

CONCLUSION

The Office Action has misinterpreted a system for locating a mobile appliance with mobile locating sensors, with a method and system for positioning location determining sensors.

The Applicant has demonstrated that the rejections are improper, it that the cited art does not disclose all the elements of the claims, and that the prior art combination do not disclose all the elements of the claims.

Respectfully submitted,



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